

WHAT IS CLAIMED IS:

1. A monoclonal or recombinant antibody or fragment thereof that binds to human telomerase reverse transcriptase (hTERT) protein having the sequence provided in SEQ. ID NO:225.
2. An antibody fragment that binds to hTERT protein having the sequence provided in SEQ. ID NO:225.
3. The antibody fragment of claim 2, which is an Fab fragment or an F(ab')<sub>2</sub> fragment.
4. The antibody or fragment of claim 1, which is a chimeric antibody.
5. The antibody or fragment of claim 1, which has a single chain.
6. A pharmaceutical composition comprising the antibody or fragment of claim 1 and a pharmaceutically acceptable carrier.
7. The antibody or fragment of claim 1, having a reporter molecule or label that is covalently or noncovalently bound.
8. The antibody or fragment of claim 7, wherein the reporter molecule or label is selected from the group consisting of an enzyme, a fluorescent agent, a chemiluminescent agent, a chromatogenic agent, and a magnetic particle.
9. A method of identifying a polypeptide in a biological sample, comprising:
  - a) combining the biological sample with a monoclonal or recombinant antibody or fragment thereof that can bind hTERT protein having the sequence provided in SEQ. ID NO:225, under conditions where the antibody or fragment will form a complex with hTERT protein;
  - b) detecting complex formed as a result of a); and
  - c) identifying the sample as containing at least a portion of hTERT protein if an antibody:protein complex is detected.

10. The method of claim 9, which is an enzyme-linked immunosorbant assay method.
11. The method of claim 9, which is a radioimmunoassay method.
12. The method of claim 9, wherein the detecting comprises fluorescent activated cell sorting.
13. A method of detecting an hTERT polypeptide in a biological sample, comprising:
  - a) combining the biological sample with a monoclonal or recombinant antibody or fragment thereof according to claim 1, under conditions where an antibody will form a complex with hTERT protein; and
  - b) detecting any complex formed between the antibody or fragment and hTERT protein.
14. The method of claim 13, which is an enzyme-linked immunosorbant assay method.
15. The method of claim 13, which is a radioimmunoassay method.
16. The method of claim 13, wherein the detecting comprises fluorescent activated cell sorting.
17. A method of generating an antibody that specifically binds hTERT protein, comprising immunizing a host with a composition comprising a protein or peptide that contains an amino acid sequence selected from any 5-1100 contiguous amino acids in SEQ. ID NO:225.
18. The method of claim 17, wherein the selected amino acid sequence comprises at least 10 contiguous amino acids in SEQ. ID NO:225.

19. The method of claim 17, wherein the protein or peptide comprises an amino acid sequence selected from the group consisting of SEQ. ID NO:112, SEQ. ID NO:113, SEQ. ID NO:114, SEQ. ID NO:115, SEQ. ID NO:116, and SEQ. ID NO:117.

20. The method of claim 17, wherein the composition further comprises an adjuvant.

21. The method of claim 17, wherein the protein or peptide is a chimera further comprising the sequence of another protein.

22. The method of claim 17, further comprising identifying the antibody in the host that binds to hTRT protein.